

REMARKS

Claims 1-23 are pending in the application. Claims 1-23 stand rejected. Claims 1, 12, and 23 are being amended. No new matter is believed to be introduced by way of the amendments.

Rejections Under 35 U.S.C. §103(a)

Claims 1-7, 9, 11, and 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Simons (U.S. Patent Application No. 6,332,198, hereinafter referenced to as “Simons”) in view of Ishiwatari (U.S. Patent No. 6,201,788, hereinafter referenced to as “Ishiwatari”).

Claim 1 is being amended in the Claim Listing above to recite “[a] reduced number of links being a function of a minimum number of links required to support an aggregate bandwidth forwarded to the second switch fabric.” Support for the amendment is found in the specification as originally filed at least on page 17, lines 19-27 and in Figs. 8-14.

Remarks Regarding Simon

Referring to Figs. 35A and 35B of Simon, a network device 540 includes a series of universal port cards 554 that are connected to switching fabric cards 570 via a group of cross-connect cards 562 and forwarding cards 546. In operation, a user may enable a port by connecting an external network connection to the port. Data received on a port card path 554 are passed to the cross-connect card 562. The cross-connect card 562 in turn passes the path data to one of the five forwarding cards 546 or eight port cards 546. In response, the forwarding card 546 determines whether the received data includes user payload data or network control information and sends any user data payloads from the cross-connect card 562 or control information to the switch fabric card 570. The switch fabric card 570 then passes the path data to one of the forwarding cards in any quadrant (*see* Column 46, lines 30-54 of Simon).

Therefore, Simon merely employs a fixed number of data paths (e.g., eight links from port cards to the cross connect and four links from the forwarding card to the switch fabric) to connect the port cards 554 and cross-connect cards 562 to the switch fabric in each quadrants. Simon does not teach or suggest employing a reduced number of links, “the reduced number of

links being a function of a minimum number of links required to support an aggregate bandwidth forwarded to the second switch fabric,” as required by Applicants’ Amended Claim 1.

Remarks Regarding Ishiwatari

Ishiwatari is being combined with Simon because, as acknowledged in the Office Action, Simon fails to teach performing facility protection switching at a subrate of the signals relative to “a rate at which” the signals are received, as required by Applicants’ independent Claims.

Ishiwatari relates to a transmission device 20 that includes a working system 20₁ and a protection system 20₂ (*See* Fig. 10 of Ishiwatari). The working and protection systems employ a demultiplexing technique to demultiplex received signals, process the demultiplexed signals, and multiplex the processed signals. The working and protection systems are connected using a group of data paths that are used to send identical signals in two directions (*see* Column 5, lines 20–32).

Accordingly, Ishiwatari merely employs a group of links to connect a working system to a protection system. Ishiwatari does not teach or suggest “coupling via the respective switch interface modules allowing a reduced number of links between the first switch fabrics and the second switch fabric” or “the reduced number of links being a function of a minimum number of links required to support an aggregate bandwidth forwarded to the second switch fabric,” as required by Applicants’ Amended Claim 1.

Obviousness Rejections

A hypothetical system combining the teachings of Simon and Ishiwatari may include a switch fabric, but it would use a fixed number of links to connect various network elements to the switch fabric. Such a system would not have any notion of employing a reduced number of links determined as a function of “a minimum number of links required to support an aggregate bandwidth forwarded to the [second] switch fabric.” In fact, such a hypothetical system would require substantial modification, effectively altering its principles of operation, to behave in a manner defined by Applicants’ Claim 1 (since the hypothetical system dedicates a fixed number of links to connect its components and has no notion of determining the number of links used

based on “an aggregate bandwidth”). Even if the hypothetical system could be modified, the modification would only be done in hindsight of Applicants’ disclosure and claims.

Therefore, it is Applicants’ position that Claim 1 is allowable over Simon in view of Ishiwatari. Accordingly, Applicants respectfully request that the rejection of this claim under 35 U.S.C. § 103(a) be withdrawn.

Independent Claims 12 and 23 are being amended to include similar elements as Claim 1. Accordingly, Applicants respectfully request that the rejection of this claim under 35 U.S.C. §103(a) be withdrawn for the reasons presented above.

Dependent Claims 9 and 20

As described above, a hypothetical system combining the teachings of Simon and Ishiwatari would employ a fixed number of links to connect various network elements to the switch fabric and would have no notion of determining the number of links used based on an aggregate bandwidth. Therefore, the hypothetical system would not include a “coupling between the first and second switch fabrics [that] is configurable,” as required by Applicants’ Claims 9 and 20. Therefore, it is Applicants’ position that Claims 9 and 20 are allowable over Simon in view of Ishiwatari. Accordingly, Applicants respectfully request that the rejection of these claims under 35 U.S.C. § 103(a) be withdrawn.

Dependent Claims 2-7, 11, 13-18, and 22

Since the remaining dependent claims, Claims 2-7, 11, 13-18, and 22, depend from independent Claims 1 and 12, Applicants respectfully request that these dependent claims be allowed for at least the same reasons as the base claim from which they depend.

Dependent Claims 8, 10, 19, and 21

Claims 8 and 19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Simon in view of Ishiwatari in further view of Taniguchi (U.S. Patent 6,456,587).

Claims 10 and 21 are rejected under 35 U.S.C. §103(a) as being unpatentable over Simon in view of Ishiwatari in further view of Li (U.S. Patent Publication No.: 20040213205).

Taniguchi is being combined with Simon and Ishiwateri because neither one of these references discloses performing facility protection switching “within the predetermined time span,” as required by Applicants’ Claims 8 and 19. However, Taniguchi merely describes a method for handling failures in a ring transmission system. Taniguchi does not teach or suggest employing a reduced number of links, “the reduced number of links being a function of a minimum number of links required to support an aggregate bandwidth forwarded to the second switch fabric,” as required by Applicants’ amended Claim 1.

Li is being combined with Simon and Ishiwateri because neither one of these references discloses “a content processor coupled to and between the first and second switch fabric to convert the signals from a first protocol to a second protocol,” as required by Applicants’ Claims 10 and 21. However, Li merely describes a voice packet switching system that uses a switch fabric to switch channels over packet and non-packet transmission links. Li does not teach or suggest employing a reduced number of links, “the reduced number of links being a function of a minimum number of links required to support an aggregate bandwidth forwarded to the second switch fabric,” as required by Applicants’ amended Claim 1.

Rejected Claims 8, 10, 19, and 21 depend from amended base Claims 1 or 12. However, as discussed above, the combination of Simon and Ishiwateri does not disclose every element of Applicants’ amended base Claims 1 and 12 nor does the combination render these claims as a whole obvious. As discussed above, the deficiencies of Simon and Ishiwateri are not cured by Taniguchi and Li. Therefore, without acquiescing to or discussing the merits of the reasons for rejecting these claims in view of the references, it is Applicants’ position that claims 8, 10, 19, and 21 are allowable over these references. Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. §103(a) of Claims 8, 10, 19, and 21 be withdrawn.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims that will be pending after the entry of this amendment, namely Claims 1-24, are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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